

CLAIMS

1 1. A method of electroacoustical transducing comprising
2 controlling audio electrical signals to be provided to a pair of electroacoustical
3 transducers of an array to achieve directivity and acoustic volume characteristics that are
4 varied with respect to a parameter associated with operation of the array, the controlling of
5 the signals resulting in a change in the radiated acoustic power spectrum of the array as the
6 characteristics are varied, and

7 compensating for the change in the radiated acoustic power spectrum of the array.

1 2. The method of claim 1 in which the compensating for the change in the
2 acoustic power spectrum comprises maintaining the radiated relative acoustic power
3 spectrum substantially uniform.

1 3. The method of claim 1 in which the compensating occurs prior to the
2 controlling.

1 4. The method of claim 1 in which the change in the acoustic power spectrum
2 resulting from the controlling of the signals is predicted, and the compensating is based on
3 the predicting.

1 5. The method of claim 1 in which the compensating is based on a volume level
2 selected by a user.

1 6. The method of claim 1 in which the compensating is based on a signal level
2 detected in the controlled audio electrical signals.

1 7. The method of claim 1 in which the controlling comprises reducing the
2 amplitude of one of the audio electrical signals for higher acoustic volume levels.

1 8. The method of claim 7 in which the controlling comprises combining two
2 components of an intermediate electrical signal in selectable proportions.

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1 9. The method of claim 1 in which the controlling of the audio electrical signals
2 comprises adjusting a level of one of the signals over a limited frequency range.

1 10. The method of claim 1 in which controlling the audio electrical signals
2 includes processing one of the signals in a high-pass filter and processing the other of the
3 signals in a complementary all-pass filter.

1 11. Electroacoustical transducing apparatus comprising
2 an input terminal to receive an input audio electrical signal, and
3 a plurality of electroacoustical transducers in an array
4 circuitry constructed and arranged to generate two related output audio electrical
5 signals from the input audio signal coupled to said electroacoustical transducers of an array,
6 and to achieve predefined directivity and acoustic volume characteristics that are varied with
7 respect to a parameter associated with operation of the array and to compensate for a change
8 in acoustic power spectrum of the array that results from the controlling of the signals.

1 12. The apparatus of claim 11 in which the circuitry comprises a dynamic
2 equalizer.

1 13. The apparatus of claim 12 in which the dynamic equalizer includes a pair of
2 signal processing paths and a combiner to combine signals that are processed on the two
3 paths.

1 14. The apparatus of claim 12 in which the circuitry is also constructed and
2 arranged to compensate for the change based on a volume level.

1 15. An electroacoustical transducer array comprising,
2 a source of related electrical signal components
3 a plurality of electroacoustical transducers driven respectively by said related
4 electrical signal components,
5 an input terminal to receive an input audio electrical signal, and
6 circuitry constructed and arranged to generate two related output audio electrical
7 signals coupled to said electroacoustical transducers of an array, to control the two related
8 output signals to achieve predefined directivity and acoustic volume characteristics that are

9 varied with respect to a parameter associated with operation of the array, and to compensate
10 for a change in radiated acoustic power spectrum of the array that results from the controlling
11 of the signals.

1 16. The apparatus of claim 15 in which the circuitry comprises a dynamic
2 equalizer.

1 17. The apparatus of claim 16 in which the dynamic equalizer includes a pair of
2 signal processing paths and a combiner to combine signals that are processed on the two
3 paths.

1 18. The apparatus of claim 15 also comprising a second input terminal to carry a
2 signal indicating a volume level for use by the circuitry.

1 19. A sound system comprising,
2 a source of related electrical signal components,
3 a pair of electroacoustical transducer arrays, each of the arrays comprising
4 a plurality of electroacoustical transducers driven respectively by said related
5 electrical signal components, and
6 an input terminal to receive an input audio electrical signal; and
7 circuitry constructed and arranged to generate two related output audio electrical
8 signals coupled to said electroacoustical transducers of an array, to control the two output
9 signals to achieve predefined directivity and acoustic volume characteristics that are varied
10 with respect to a parameter associated with operation of the array, and to compensate for a
11 change in acoustic power spectrum of the array that results from the controlling of the
12 signals.

1 20. The electroacoustical transducing apparatus in accordance with claim 11
2 wherein said array comprises first and second closely spaced loudspeaker drivers having their
3 axes angularly displaced by substantially 60 degrees.